AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph **[0002]** with the following paragraph rewritten in amendment format:

[0002] The present invention generally relates to a method for producing and applying an antiscatter grid or collimator to an x-ray or gamma detector. Preferably, it relates to a method for producing and applying an antiscatter grid or collimator to an x-ray or gamma detector having ~~matricially arranged detector elements~~an array of detector elements which form a detector surface with detection regions sensitive to x-radiation and/or gamma radiation and less sensitive intermediate regions. It further generally relates to an x-ray and gamma detector having an antiscatter grid or collimator which has been produced and applied using this method.

Please replace Paragraph **[0004]** with the following paragraph rewritten in amendment format:

[0004] Besides x-ray films and gas detectors, solid-state detectors are being used increasingly as x-ray detectors, these generally having a ~~matricial~~matrix shaped arrangement of optoelectronic semiconductor components as photoelectric receivers. Each pixel of the x-ray image should ideally correspond to the attenuation of the x-radiation by the object on a straight axis from the point x-ray source to the position on the detector surface corresponding to the pixel. X-rays which strike the x-ray detector from the point x-ray source in a straight line on this axis are referred to as primary beams.

Please replace Paragraph **[0010]** with the following paragraph rewritten in amendment format:

[0010] In recording x-ray images, increasing use has recently been made of solid-state detectors which are formed from a plurality of ~~matricially arranged detector elements~~an array of detector elements. The detector elements are arranged in this case in a generally square or rectangular grating. In the case of such solid-state detectors, as well, there is a need to employ effective suppression measures to reduce as far as possible the striking of scattered beams on the detector surface formed by the detector elements. Because of the regular structuring of the pixels, formed by the detector elements, of the detector, there is here, in addition, the risk of mutual interference between the structures of pixels and antiscatter grids. Disturbing moiré phenomena can thereby arise. These can certainly in specific instances be minimized or removed by a downstream image processing measure. However, this is possible only when their projection image on the detector is absolutely immutable.

Please replace Paragraph **[0015]** with the following paragraph rewritten in amendment format:

[0015] In future, increasing use will also be made for recording gamma images of solid-state detectors which are formed from ~~a plurality of matricially arranged~~ an array of detector elements. The detector elements are arranged in this case in a generally square or rectangular grating. In the case of such solid-

state detectors, as well, there is a need to employ effective suppression measures to reduce as far as possible the striking of scattered beams on the detector surface formed by the detector elements. Because of the regular structuring of the pixels, formed by the detector elements, of the detector, there is here, in addition, the risk of mutual interference between the structures of pixels and collimators.

Please replace Paragraph **[0016]** with the following paragraph rewritten in amendment format:

[0016] Collimators for gamma cameras are generally produced from mechanically folded lead lamellae. This is a relatively cost-efficient solution. However, it has the disadvantage that, in particular when using solid-state cameras with an array of ~~matricially arranged~~ detector elements, for example in the case of cadmium-zinc telluride detectors, perturbing aliasing effects can arise because the structure of these collimators is then relatively coarse.

Please replace Paragraph **[0018]** with the following paragraph rewritten in amendment format:

[0018] US 6,021,173 A describes an approach which is intended to avoid moiré structures during operation of an x-ray detector having an array of ~~matricially arranged~~ detector elements in conjunction with an antiscatter grid arranged in a stationary fashion. In this publication, the antiscatter grid is applied directly to the x-ray detector over the detector surface. The absorbing

structure elements of the antiscatter grid are designed at a spacing from one another which is smaller than the extent of the smallest resolvable detail in the x-ray image. The regularly arranged absorbing structure elements are consequently formed at so high a spatial frequency

Please replace Paragraph **[0020]** with the following paragraph rewritten in amendment format:

[0020] An object of an embodiment of the present invention to specify a method for producing and applying an antiscatter grid or collimator to an x ray or gamma detector having an array of ~~matricially arranged~~ detector elements and with the aid of which it is possible to realize an arrangement of an antiscatter grid or collimator on an x-ray or gamma detector which permits image recording without moiré structures in conjunction with a high detective quantum efficiency.

Please replace Paragraph **[0047]** with the following paragraph rewritten in amendment format:

[0047] Finally, the coating 14 is removed at the end faces of the intermediate walls 6a by a chemical or mechanical method step, for example a chemical etching step 15 (figure 4c). An antiscatter grid or collimator is obtained in this way which has transmission channels 5 that are situated between the absorbing coatings 14 of the intermediate walls [[6b]] 6a of the basic structure 6 (figure 4d). The intermediate walls [[6b]] 6a likewise form with the coatings 14

delimiting them transmission channels for the primary radiation which have a very high aspect ratio.

Please replace Paragraph **[0049]** with the following paragraph rewritten in amendment format:

[0049] After finishing the antiscatter grid or collimator, the latter is bonded onto the detector 7 in such a way that the intermediate walls 6a are situated over less sensitive intermediate regions 16b of the detector (figure 4e). A thermally melted adhesive 21 is applied to the detector 7 before the antiscatter grid or collimator is mounted to the detector 7. A detail of the detector 7 with the ~~matricially arranged~~ array of detector elements [[16]] 16a, 16b is illustrated in figure 4e. The detector elements [[16]] 16a, 16b form a detector surface having regions 16a which are sensitive to x-rays or gamma rays, and insensitive intermediate regions 16b.

Please replace Paragraph **[0050]** with the following paragraph rewritten in amendment format:

[0050] Figure 5 shows a result of the method illustrated in figure 4. To be seen in plan view in the figure is a detail of an x-ray detector 7 with the ~~matricially arranged~~ array of detector elements [[16]] 16a, 16b and the antiscatter grid bonded thereon. The detector elements [[16]] 16a, 16b are assembled from the radiation-sensitive detector regions 16a and radiation-insensitive intermediate regions 16b. The detector elements [[16]] 16a, 16b are also referred to as pixels.

Such an x ray detector 7 can have, for example, 3000 x 3000 pixels with dimensions of 143 x 143 μm. To be seen in the left-hand corner region of each detector surface is a switching element 17, for example a TFT, which does not contribute to the detection of radiation.